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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------|------------------|
| 10/632,748 | 08/01/2003 | Rajasingh Israel | 126238 (GECZ 2 00672) | 3854 |
| 27885 | 7590 | 11/02/2005 | EXAMINER | |
| FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114 | | | COLON, GERMAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2879 | |

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,748

Applicant(s)

ISRAEL ET AL.

Examiner

German Colón

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2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 15-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 20-24 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 08/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in the reply filed on July 25, 2005 is acknowledged.
2. Addition of claims 23-24 has been entered.

Claim Objections

3. Claim 5 is objected to because of the following informalities:

Claim 5 recites the limitation of "the % reflectance of the reflective interior surface is at least 94.5% *layer*". It is not clear whether the intended feature is "the % reflectance of the reflective material *layer* is at least 94.5%" or "the % reflectance of the reflective interior surface is at least 94.5%".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim recites the relationship: $1.1(1+0.9n) \leq t_{\text{opt}} \leq 1.4(1+0.9n)$, wherein n is an integer. The Examiner notes that said relationship is dimensionally inconsistent. The (optical) thickness comprises *length* dimensions; however, both the left and right sides of the equation

only comprise constants, i.e. they are dimensionless. It is improper to compare two values when one refers to a *length*, and the other to an arbitrary number.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-11, 13-14, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhao et al. (US 6,382,816).

Regarding claims 1, 20, 21 and 24, Zhao discloses a method of forming a lamp (see at least Figs. 2, 3 and 8) comprising:

providing a reflective interior surface comprising:

providing a layer 14 of reflective material (see Col. 3, line 43); and

providing a protective layer 16 (see Col. 3, lines 45-46) which protects the layer of reflective material against oxidation and sulfide formation (see Col. 4, lines 64-67); and

forming the lamp from the interior surface and a light source, the protective layer having a predetermined thickness. Zhao discloses the reflective layer comprising silver and the protective layer comprising silica having a thickness in the range of 500 to 1400 Å (see Col. 6, lines 24-27).

The reference is silent regarding the limitation of “a color correction temperature of the lamp is no less than 40K below a color correction temperature of the light source, and a %

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reflectance of the reflective interior surface is no less than about 3% below that of an equivalent reflective interior surface without the protective layer in a visible spectral range of 400-800 nm”.

However, the Examiner notes that Zhao discloses each and every structural limitation of the claims. Accordingly, the reference necessarily provides the functions of “a color correction temperature of the lamp is no less than 40K below a color correction temperature of the light source, and a % reflectance of the reflective interior surface is no less than about 3% below that of an equivalent reflective interior surface without the protective layer in a visible spectral range of 400-800 nm” since they are inherent of the structure.

Regarding claim 2, the claim is rejected over the reasons stated in claim 1.

Regarding claims 3 and 4, Zhao discloses the color correction temperature being no less than about 20K below that of the light source (see disclosed thickness for protective layer in Col. 6, lines 24-27).

Regarding claims 5-7, Zhao discloses the % reflectance of the reflective interior surface being at least 94.5% in the visible spectral range of 400-800 nm (see disclosed materials and thicknesses for reflective layer and coating layer, in view of rejection of claim 1).

Referring to claim 8, Zhao discloses the reflective material comprising silver (see Col. 5, lines 9-12).

Referring to claim 9, Zhao discloses the protective layer comprising silica, titania or alumina (see at least Col. 3, lines 46-47).

Referring to claim 10, Zhao discloses the protective layer comprising silica (see at least Col. 6, lines 24-27).

Referring to claim 11, Zhao discloses the protective layer comprising silica having a thickness in the range of 850-1400 Å (see Col. 6, lines 24-27).

In regards to claim 13, Zhao discloses the method including a tubulation step, wherein the step of providing the protective layer includes forming the reflective layer after the tubulation step (see Col. 7, lines 32-35). The Examiner notes that while this embodiment is not preferred, the reference still anticipates the claimed method.

In regards to claim 14, Zhao discloses the protective layer being deposited by CVD (see Col. 6, lines 8-10, in view of Col. 5, line 16).

In regards to claims 22-23, the claims are rejected over the reasons stated in the rejection of claim 21.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Golz et al., Gielen et al. and Sagal et al. disclose a lamp including a reflector comprising a reflective layer and a protective coating.

Contact Information

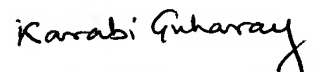
Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gc


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PRIMARY EXAMINER